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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/709,480   | 05/08/2004  | Timothy Kingston     | 07589.0164.PCUS00   | 1683             |
| 28694  | 7590        | 07/08/2005           | EXAMINER            |                  |
| NOVAK DRUCE & QUIGG, LLP<br>1300 EYE STREET NW<br>SUITE 400 EAST TOWER<br>WASHINGTON, DC 20005 |             |                      | HO, HA DINH         |                  |
|  |             |                      | ART UNIT            | PAPER NUMBER     |
|  |             |                      | 3681                |                  |

DATE MAILED: 07/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/709,480

Applicant(s)

KINGSTON ET AL.

Examiner

Ha D. Ho

Art Unit

3681

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☒ Claim(s) 10-12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This Office Action is responsive to Applicant's Amendment filed on 5/12/05. Claim 1 has been amended, claim 9 has been canceled, and new claims 10-12 have been added accordingly. Claims 1-8 and 10-12 are currently pending.

#### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jirousek et al. (US 4,317,498) in view of Kingston (US 6,090,006) and Forster (US 5,813,938).

Jirousek et al teach an arrangement (see Fig. 1) for driving a wheel of a vehicle, said arrangement comprising: a planetary gear transmission 74 including a sun gear 80 connected to a driving axle 30, a planet carrier 82 on which at least one planet gear 78 is arranged in engagement with the sun gear, and a ring gear 76 arranged around and in engagement with said planet gear; said ring gear and an outer, static part (16, 18) are of one piece construction and form an annular member, a braking device 46 and a wheel hub 86, said hub being fixedly connected to the planet carrier, and a bearing arrangement (94, 96) provided between races in the hub and the annular member, wherein the race provided in the hub 86 is located radially outside the race provided in the annular member (76, 16, 18).

Jirousek et al show the braking device 46 being arranged to brake the sun gear 80 instead of the planet carrier 82 relative to the static part.

Kingston teaches an arrangement (see Fig. 1) for driving a wheel of a vehicle, said arrangement comprising: a planetary gear transmission including a sun gear 10 connected to a driving axle 6, a planet carrier 2 on which at least one planet gear 4 is arranged in engagement with the sun gear, and a ring gear 30 arranged around and in engagement with said planet gear; said ring gear and an outer, static part 28 form an annular member, a braking device 34 and a wheel hub 16, wherein the braking device 34 is arranged to brake the planet carrier 2 relative to the static part 28 that is arranged outside the planet carrier in the radial direction.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the braking device of Jirousek et al in view of Kingston such that the braking device is arranged to brake the planet carrier relative to the static part in order to provide quicker braking action on the wheel hub relative to the static part since the wheel hub is firmly connected to the carrier.

Jirousek et al do not show the bearing arrangement (94, 96) having balls provided between the races in the hub and the annular member.

The bearing having balls provided between the races is old and well known in the art. For example, Forster shows a wheel hub arrangement having ball bearings (12', 13') (see Fig. 3).

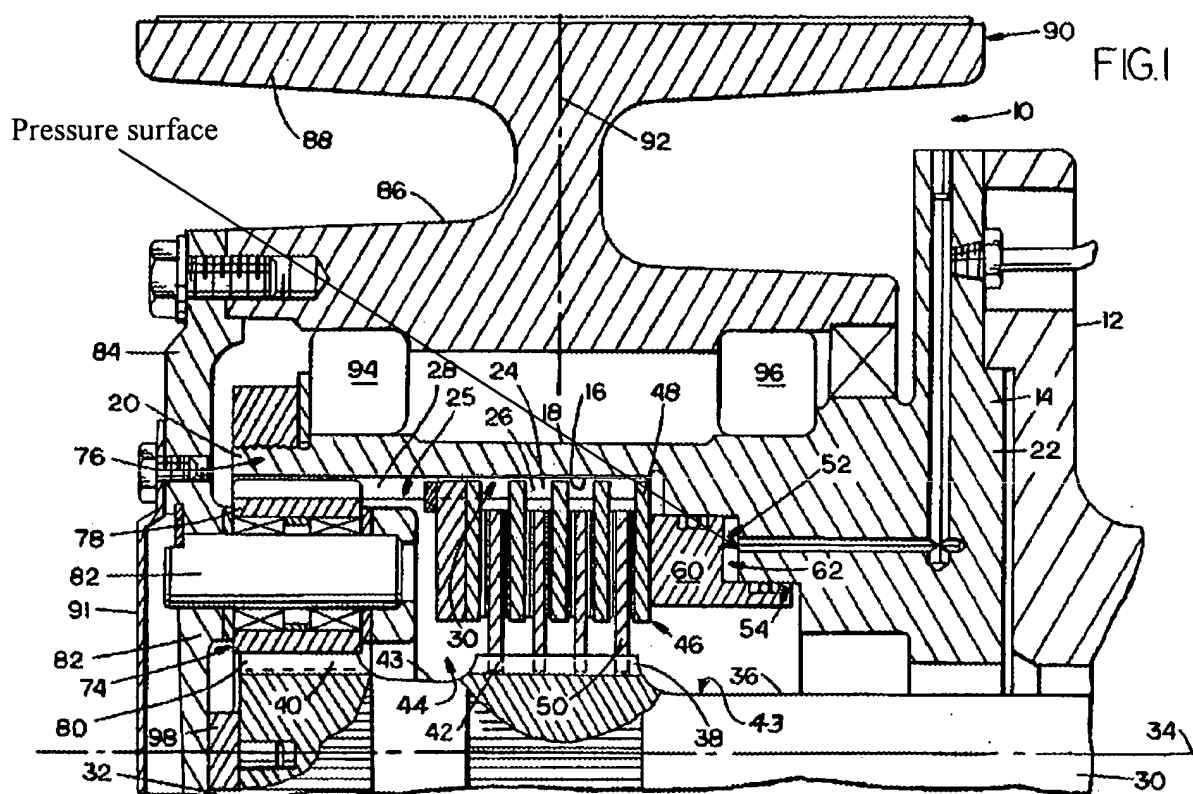
It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide balls between the races in the hub and the annular member of Jirousek et al in view of Forster since the Examiner takes an Official Notice that a ball bearing is old and well known in the art. Moreover, the ball bearing has more degrees of freedom with respect to any other type of bearings, such as roller bearings.

Regarding claim 2, the modified arrangement would have the braking device and the hub being arranged on the planet carrier on different sides of the planet gear.

Regarding claim 3, wherein the hub 86 is mounted against the annular member outside in the radial direction of that portion of the annular member which forms the ring gear 76, and also against said portion.

Regarding claim 4, Jirousek et al show the bearing arrangement including two bearings. The modified wheel hub arrangement would have two rows of balls arranged at a mutual spacing in the axial direction of the driving axle.

Regarding claim 5, wherein the annular member forms a pressure surface (see the Fig. below) for said braking device.



Regarding claim 6, wherein the outer, static part (16, 18) forms a portion of a brake housing for the braking device.

Regarding claim 7, wherein the annular member is connected firmly to an axle case (see col. 2, lines 22-25).

Regarding claim 8, the modified arrangement would have first brake disks 50 connected to the carrier, second brake disks 48 connected to the static part, and a pressure applicator 60 for pressing the first and second brake disks together.

#### *Allowable Subject Matter*

4. Claims 10-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### *Response to Arguments*

5. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection (see paragraph 3 above).

#### *Conclusion*

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

### *Communication*

7. Submission of your response by facsimile transmission is encouraged. The fax phone numbers for the organization where this application or proceeding is assigned are **(703) 872-9306**. Recognizing the fact that reducing cycle time in the processing and examination of patent applications will effectively increase a patent's term, it is to your benefit to submit responses by facsimile transmission whenever permissible. Such submission will place the response directly in our examining group's hands and will eliminate Post Office processing and delivery time as well as the PTO's mail room processing and delivery time. For a complete list of correspondence not permitted by facsimile transmission, see M.P.E.P. 502.01. In general, most responses and/or amendments not requiring a fee, as well as those requiring a fee but charging such fee to a deposit account, can be submitted by facsimile transmission. Responses requiring a fee which applicant is paying by check should not be submitting by facsimile transmission separately from the check. Responses submitted by facsimile transmission should include a Certificate of Transmission (M.P.E.P. 512). The following is an example of the format the certification might take:

I hereby certify that this correspondence is being facsimile transmitted to  
the Patent and Trademark Office on \_\_\_\_\_

(Date)

Typed or printed name of person signing this certificate:

\_\_\_\_\_  
\_\_\_\_\_

(Signature)

If your response is submitted by facsimile transmission, you are hereby reminded that the original should be retained as evidence of authenticity (37 CFR 1.4 and M.P.E.P. 502.02). Please do not separately mail the original or another copy unless required by the Patent and Trademark Office. Submission of the original response or a follow-up copy of the response after your response has been transmitted by facsimile will only cause further unnecessary delays in the processing of

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your application; duplicate responses where fees are charged to a deposit account may result in those fees being charged twice.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ha D. Ho whose telephone number is **571-272-7091**. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor can be reached on **571-272-7095**.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

***NEW CENTRAL FAX NUMBER***

Effective July 15, 2005

9. On July 15, 2005, the Central FAX Number will change to **571-273-8300**. This new Central FAX Number is the result of relocating the Central FAX server to the Office's Alexandria, Virginia campus.

Most facsimile-transmitted patent application related correspondence is required to be sent to the Central FAX Number. To give customers time to adjust to the new Central FAX Number, faxes sent to the old number (703-872-9306) will be routed to the new number until September 15, 2005. After September 15, 2005, the old number will no longer be in service and **571-273-8300** will be the only facsimile number recognized for "centralized delivery".

**CENTRALIZED DELIVERY POLICY:** For patent related correspondence, hand carry deliveries must be made to the Customer Service Window (now located at the Randolph Building, 401 Dulany Street, Alexandria, VA 22314), and facsimile transmissions must be sent to the Central FAX number, unless an exception applies. For example, if the examiner has rejected claims in a regular U.S. patent application, and the reply to the examiner's Office action is desired to be transmitted by facsimile rather than mailed, the reply must be sent to the Central FAX Number.

HDH  
(571) 272-7091  
July 6, 2005

  
**HA HO**  
**PRIMARY EXAMINER**  
Art Unit 3681

7/6/05